

**Notice of Allowability**

Application No.

10/797,104

Examiner

Hetul Patel

Applicant(s)

HARA ET AL.

Art Unit

2186

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11 March 2004.
2. ☒ The allowed claim(s) is/are 1-5 and 7-12; renumbered as 1-11, respectively.
3. ☐ The drawings filed on 11 March 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 03/11/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. Claims 1-12 are presented for examination.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on March 11, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Priority***

3. Receipt is acknowledged of papers submitted on March 11, 2004 under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

## **EXAMINER'S AMENDMENT**

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Beckers (Reg. No.: 30,358) on 03/20/2006.

The application has been amended as follows:

- Replace the current title with following title:

*“MEMORY INTERFACE CIRCUIT HAVING PLURALITY OF PREFETCH BUFFERS, EACH ASSIGNED TO EITHER FIRST PREFETCH BUFFER ENABLED FOR REWRITE OR SECOND PREFETCH BUFFER DISABLED FOR REWRITE DURING NORMAL OPERATION PERIOD”*

- Cancel the claim 6.
- Claim 7, line 1: Change the dependency of claim 7 from claim 6 to claim 1.

***Allowable Subject Matter***

5. Claims 1-5 and 7-12 are allowed; and renumbered as 1-11, respectively.

**REASONS FOR ALLOWANCE**

6. The following is an examiner's statement of reasons for allowance:

None of the prior arts of record teach or suggest, either alone or in combination, all limitations of the independent claims of the current invention (claims 1 and 10); particularly a memory interface circuit comprising an address generating unit, a data selecting unit, a main control unit and a plurality of prefetch buffers each having a tag register for storing a branch address, and a data register for storing instruction data stored in an area of said external memory designated by the branch address stored in the tag register; a first address comparing unit for activating a tag hit signal when said internal address coincides with the branch address stored in the tag register; each of the said prefetch buffers is assigned to either a first prefetch buffer which is rewritable during said normal operation period or a second prefetch buffer to be disabled for

rewrite during said normal operation period and containing in advance a specified branch address and instruction data stored in an area of said external memory designated by the specified branch address.

Claims 2-5, 7-9 and 11-12 further limit the allowable independent claims. These claims are therefore also allowable for the same reasons as set forth supra.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hetul Patel whose telephone number is 571-272-4184. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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